
Vermont Yankee: History and Context

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Overview

- Vermont Yankee, utility regulation in general, and the special status regulating nuclear power.
- Entergy's Purchase of Vermont Yankee
- The Memorandum of Understanding
- Issues the Board Addressed

What is Vermont Yankee?



* A 620 MW Boiling water nuclear reactor that commenced operation in November, 1972, and supplies one-third of Vermont's electricity through a 10 year contract that expires in 2012 - as does the current operating license.

How Does Vermont Yankee Affect Vermont's Power Grid ?

- There is no separate “Vermont power grid.” Rather, Vermont utilities operate as part of the overall the New England system, buying power from multiple sources in New England, New York and Canada.
- Vermont Yankee provides about one-third of Vermont's electricity, but only about 2% of New England's 30,000+ MW system.
- Vermont Yankee conducted a refueling from October 19 to November 10 with little impact on the grid or wholesale power markets.



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Building and Owning Vermont Yankee

- Vermont Yankee began commercial operation in 1972 subject to
 - 40 year license from the Nuclear Regulatory Commission and
 - Certificate of Public Good from the VT Public Service Board
- Original ownership was by several New England utilities, with Central Vermont and Green Mountain Power as the lead owners
- In 2001 the Board rejected various proposals to transfer ownership to Amergen or Entergy
- In 2002 the Board approved transfer of ownership to Entergy –VY (ENVY)

A Century of Regulation of Electric Utilities

- * Small private electric companies rapidly merged and grew into monopolies. States regulated energy monopolies through utility commissions, such as the Vermont Public Service Board (1912)
- * “The New Deal” saw federal regulation of interstate and wholesale electric sales. Retail sales were left to state regulation.
- * Until the early 70’s, regulated utilities expanded and powered the nation while reducing the price of electricity. Then costs began to rise

How Does Vermont Regulate Power Plants?

- **Public Service Board** shall have:
 - “the powers of a court of record” and shall
 - “make orders and decrees, and enforce the same by any suitable process...” 30 VSA §3 and §9
- **Department of Public Service** shall:
 - Supervise and direct the execution of firms engaged in electricity generation and
 - Represent the interests of the people of the state in hearings before the Board 30 VSA §2

How Does Vermont Regulate Power Plants?

- State authority over power plants extends to:
 - * siting
 - * operating and conducting business
 - * transfer of ownership
 - * large power purchases

How Does Vermont Regulate Power Plants?

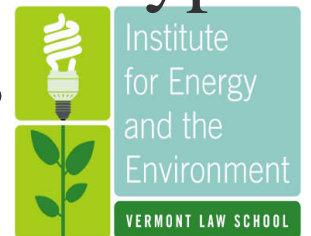
- Because the Board acts with the authority of a court of record, and Department acts as advocate for the public, agreements between the Department and other parties are the same as settlements of litigation

Does Federal Law Trump State Regulation ?

The U.S. Supreme Court says both state and federal laws apply to nuclear power plants.

Pacific Gas & Electric (1983)

“the Federal Government maintains complete control of the safety and “nuclear” aspects of energy generation, whereas the **States exercise their traditional authority over economic questions** such as the need for additional generating capacity, the type of generating facilities to be licensed, land use, and ratemaking.” (emphasis added)



Does Federal Law Trump State Regulation ?

The U.S. Supreme Court also said:

“Congress intended that the federal government should regulate the radiological safety aspects involved in the construction and operation of a nuclear plant, but that the States retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost and other related state concerns.”

Review: Dates, Topics & Context

- 1972 – Vermont Yankee begins commercial production under cooperative ownership of several Vermont utilities
- 1983 – In *Pacific Gas & Electric*, Supreme Court addresses “cooperative federalism in regulating nuclear power plants
- 2001 – VT PSB denied sale of Vermont Yankee to AmerGen; rejected offers from Entergy; suggested formal auction.
- 2002 – VT PSB approved improved Entergy offer

What Did PSB Consider ?

- Linked, two-part petitions:
 - 1) ownership and operation *and*
 - 2) long-term power contracts

- Legal Standards:
 - General good standard for ownership and operation and
 - More specific factors Set out in 30 VSA Sec 248

2001 Proposed Purchase By Amergen— rejected by PSB

- * Docket 6300 – Final Order of February 14, 2001 - dismissed requested sale of VY to AmerGen: “...the proposed purchase price [did] not reflect the fair market value...”
- * “We stress that fair market value, like the general good of the state, is a matter of more than mere cash payment...”
- * Board noted that an auction would work, pointing to successes of other states that used multi-bidder processes.

Sale of Vermont Yankee to Entergy (I)

* Docket 6545 – Final Order of June 13, 2002 - approved sale of VY to “Entergy Nuclear Vermont Yankee, LLC.” “Today, we apply that same standard and substantially approve a much improved proposal to sell Vermont Yankee.

Sale of Vermont Yankee to Entergy (II)

The major components of the transaction are the sale of Vermont Yankee for a fixed price coupled with a commitment by the current owners of VYNPC to purchase power from Vermont Yankee for the remaining term of its license.

PSB Order:

Sale of Vermont Yankee to Entergy (III)

- * In granting Entergy's petition, the Board cited and relied upon a crucial MOU:

Among the important features:
(discussed later)

- **Board Approval of Operating License Renewal**
- **Sharing Excess Funds on Delayed Decommissioning**

Why Entergy and NOT AmerGen?

➤ *In reviewing power purchases, the Board applies 30 VSA §248 and approves good proposals and rejects poor ones*

- 1) Purchase Price
- 2) Power Purchase Agreement
- 3) Multiple non-price factors,
- 4) Continued benefits to Vermont and Vermont ratepayers through the Memorandum of Understanding

The Public Service Board on VY Safety - 1

“ We begin, but do not end, our thoughts with a pragmatic observation. To the extent that early closure might be justified *for non-financial reasons, such as nuclear waste and radiological safety, we have limited authority* because Congress has placed nuclear waste and safety issues with the federal Nuclear Regulatory Commission, and not with this Board.

...

The Public Service Board on VY Safety - 2

.. . Our power over Vermont Yankee, like the NRC's power over safety issues, is limited to what is conferred by law. If we did not respect the choice of Congress in giving the NRC it's power, we would have no right to expect Vermont Yankee's owners — who ever they might be — to respond to the authority that we *have* been given by law.”

Docket 6545, page 148-149. Emphasis in original



Sale of Vermont Yankee to Entergy

Factors Leading to Approval

- 1) record of Entergy operation at other nuclear power plants
 - proper management and stable financing
(focus on reliability, not safety directly)
- 2) lower rates to VT ratepayers if Entergy took over maintenance
- 3) shift operating and **decommissioning costs** to Entergy
- 4) Purchase Power Agreement advantageous to VT ratepayers
- 5) other important commitments
 - increased access by VT Engineer
 - first opportunity at future power contracts for VT owners
 - **Vermont jurisdiction over re-issuance of CPG**
- 6) lower rates to VT ratepayers than early decommissioning

Memorandum of Understanding

- Buying Vermont Yankee required PSB approval. In seeking it, Entergy agreed that it would not operate the plant beyond the original operating license (expiring in 2012) without approval of Vermont's Public Service Board.
- Board explicitly relied upon the MOU when granting the petition to purchase VY.

Memorandum of Understanding (I)

Topics in the MOU

- 1) Additional Power (preference to Vermont)
- 2) Inspection MOU (increased access to documents and plant)
- 3) Sharing Excess Funds on Delayed Commissioning
- 4) Sharing Excess Fund Revenue After License Extension
- 5) Decommissioning Status (to Board, Department and public)
- 6) Decommissioning Cost Study (updated every 5 years)
- 7) Board Approval for Amendment to Trust Regarding Use of Funds
- 8) Board Approval for Amendment to Trust Regarding Distribution of Funds
- 9) Site Restoration and Spent Fuel Management
- 10) Transfer of Decommissioning Fund
- 11) Spent Fuel
- 12) Board Approval of Operating License Renewal
- 13) Financial Integrity
- 14) PPA Low Market Adjustment Mechanism
- 15) Prudence, Used and Useful
- 16) Additional Provisions

Memorandum of Understanding (II)

No Operation Beyond 2012 Without PSB Approval

“The signatories to the MOU agree that ... any Board order issuing a CPG to ENVY and ENO shall provide that operation of VYNPS beyond March 21, 2012 shall be allowed only if application for renewal of authority under the CPG to operate the VYNPS is made and granted.”

Memorandum of Understanding (III)

Waiver of Pre-emption Claims

“Each of VYNPC, CVPS, GMP, ENVY and ENO expressly and irrevocably agrees: (a) that the *Board has jurisdiction under current law to grant or deny approval* of operation of the VYNPS beyond March 21, 2012 and (b) to *waive any claim each may have that federal law preempts the jurisdiction of the Board* to take the actions and impose the conditions agreed upon in this paragraph to renew, amend or extend the ENVY CPG and ENO CPG to allow operation of the VYNPS after March 21, 2012, or to decline to so renew, amend or extend.” (Emphasis added.)

Three More Things to Know About the Sale of Vermont Yankee to Entergy

1 - Decommissioning Costs

Docket 6545, pages 31 - 35 make it very clear that all costs and risks associated with decommissioning are transferred to ENVY and Entergy.

“ENVY agrees to assume all liability associated with decommissioning Vermont Yankee.” (Docket 6545, Finding of Fact 24.)

Details re Decommissioning Commitments

- **“In the case of a premature shutdown at a time when the decommissioning fund is not fully funded, Vermont Yankee could be placed in SAFESTOR to allow the decommissioning trust fund to increase in value until sufficient funds exist.” (Dkt 6545, FF 31.)**
- **“...the financial assurances that Entergy has agreed to provide ENVY will be sufficient to ensure that ENVY has the resources it needs to operate and to eventually close and decommission Vermont Yankee. In addition, commitments and obligations from Entergy’s parent corporation now back ... its proposed Vermont subsidiaries.” (Dkt 6545, p 151.)**

Three More Things to Know About Vermont Yankee and Entergy

2 – Revenue Sharing if License is Extended

Paragraph 4 of the MOU and Docket 6545, pages 69 through 71 require that 50% of “excess revenue” be shared with the previous owners of Vermont Yankee – major Vermont utilities – which in turn, will be reflected in Vermont electricity prices.

Details re Revenue Sharing

- “...if Vermont Yankee’s average energy price exceeds \$61/MWh (adjusted for inflation beginning in 2013), ENVY will share 50 percent of the excess revenues with VYNPC and its Sponsors. This sharing mechanism captures some of the value that Vermont Yankee’s owners would obtain if they had not sold the station and successfully relicensed.” (Docket 6545, p 71.)
- “ENVY agrees to share with VYNPC fifty percent of the
- “Excess Revenue” for ten years commencing on March 13,
- 2012.” (MOU, paragraph 4.)

Three More Things to Know About Vermont Yankee and Entergy

3 - Clean Energy Fund

The sale approval includes strong language that directs certain “windfall” funds to be directed toward the development and use of renewable resources.

Details Re Clean Energy Fund

- **“...Green Mountain and Central Vermont shall submit a plan for using their share of those funds to benefit ratepayers. The plan shall include consideration of renewable resources. The plan shall consider the application of a significant portion of these benefits towards the development and use of renewable resources.”**
- (Dkt 6545, Order 17 at p160.)
- **“... if we are to turn the idea of reliance on renewables**
- **from a dream to reality, it is important – indeed vital –**
- **not to underestimate the magnitude of the transition.”**
- (Dkt 6545, p 153.)

What Has Happened Since 2002 ?

- *Legislature ordered PSB not to approve license extension without legislative consent.*
- * Legislature created task force to report on Vermont Yankee's engineering/operational reliability
- * PSB approved “power uprate” of VY from 530 MW to 620 MW
- * PSB approved dry cask storage facility to store spent nuclear fuel generated at Vermont Yankee.

Vt Rules are not all that have changed

- VY has delivered much power at attractive cost, but has had several operational problems
- * New England markets have grown and added options
- * Whole sale power costs have risen greatly and seem likely to rise more
- * Energy Efficiency proven able to hold statewide kWh demand flat, or slightly reduce it
- * Concerns about Climate Change have risen greatly.

Conclusions

Vermont has the power to make serious choices here:

Legally, there is real discretion

Pragmatically, there are ‘business choices’ to be made.

Conclusions

- * The “legal choice” is real:

The NRC has exclusive authority over the nuclear safety aspects of licensing for the NRC;

however,

states retain jurisdiction over economic questions such as the need for additional generation, the type of facilities to be licensed, land use; rate-making and reliability.

Conclusions

The ‘business choice’ choice is real:

at 620 MW, Vermont Yankee provides approximately 2% of the power on the New England electric grid; Vermont can take an attractive offer if the reliability report is favorable, or make other choices if Entergy does not make an attractive offer